

SHOE STRUCTURE

FIELD OF THE INVENTION

The present invention relates to a shoe structure, and more particularly, to a shoe having a midsole which located between the outsole and the insole. The
5 midsole is supported on a support member which is made of composite material.

BACKGROUND OF THE INVENTION

A conventional shoe structure 10 is shown in Figs. 1 and 2 and generally includes an outsole 12, a midsole 13, an insole 14 and a heel portion 11. The outsole 12 has one end adhered to the heel portion 11 which has an extension 111
10 from a top thereof so as to laminate on a top of the outsole 12. The midsole 13 and the insole 14 are respectively attached to the top of the outsole 12. The extension 111 is generally made of metal so as to provide support of the load applied on the shank of the shoe between the heel portion 11 and the outsole 12 that contacts the ground. Nevertheless, in order to reduce the total weight of the shoe, the extension
15 111 is made to be a thin plat which tends to be deformed by the load and the deformation of the extension 111 makes the shoe to be uncomfortable. Some material for the extension 111 could get rusted which contaminates the appearance of the shoe.

The present invention intends to provide a shoe structure that has a
20 midsole supported on a support member made of composite material and the support member has a side wall for providing better support for the foot.

SUMMARY OF THE INVENTION

In accordance with one aspect of the present invention, there is provided a shoe structure which comprises an outsole connected to a heel portion and a midsole is laminated on the outsole. The midsole is supported on a support member which is made of composite. A side wall extends perpendicularly from a periphery of a rear end of the support member. A connection piece has spikes which penetrate through the midsole and the support member so as to be connected to a top of the heel portion. An insole is laminated on the midsole and a vamp is securely connected to a periphery of the outsole.

The present invention will become more obvious from the following description when taken in connection with the accompanying drawings which show, for purposes of illustration only, a preferred embodiment in accordance with the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is an exploded view to show a conventional shoe structure;

Fig. 2 is a side cross sectional view to show the conventional shoe structure;

Fig. 3 is an exploded view to show the shoe structure of the present invention;

Fig. 4 is a side cross sectional view to show the shoe structure of the present invention, and

Fig. 5 shows that the insloe on the midsole is in flush with the side wall of the support member.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to Figs. 3 and 4, the shoe structure of the present invention comprises an outsole 23 having a bent end which is connected to a heel portion 21 and a heel lift 24 is connected to an underside of the heel portion 21. A midsole 26 is disposed on the outsole 23 and a support member 27 supports on an underside of the midsole 26 and located between the outsole 23 and the midsole 26. The support member is made of composite fibers 27 and includes a side wall 271 extending perpendicularly from a periphery of a rear end thereof. A connection piece 261 has spikes 262 which penetrate through the midsole 26 and the support member 27 so as to be connected to the top of the heel portion 21. The midsole 26 and the support member 27 can be made as a one-piece member which is light in weight and may bear large load on it so that the shoe is not deformed when the shoe is used for a period of time. The side wall 271 of the support member 27 may extend to a plantar arch of the wear's foot so that it prevents object from penetrating the midsole 26 and protects the wear's foot.

The support member 27 can be made of thermosetting plastic or thermo-plastic. The thermosetting plastic or thermo-plastic can be mixed with other material when making the support member 27.

An insole 22 is laminated on the midsole 26 and a vamp 25 is securely connected to a periphery of the outsole 23.

The shoe is light and the support member 27 provides a good support so that the shape of the shoe is maintained even if the shoe is used for a long period of time. The side wall 271 enclose the foot heel of the wearer and provides comfortable wearing feature.

The composite fibers of the support member 27 may also be woven with each other and include specific patterns, and the outsole 23 can be made of transparent material so that the patterns can be seen via the transparent outsole 23.

As shown in Fig. 5, the insole 22 on the midsole 26 is in flush with a top
5 edge of the side wall 271 of the support member 27.

While we have shown and described the embodiment in accordance with the present invention, it should be clear to those skilled in the art that further embodiments may be made without departing from the scope of the present invention.